

### **REMARKS/ARGUMENTS**

The non-final Office Action of May 4, 2004 has been carefully reviewed and these remarks are responsive thereto. The Office Action rejects claims 20, 22, 42, 44, 50, 51, 53, and 68-70, and allows claims 1, 2, 4-9, 23, 24, 26-41, and 45-49. Reconsideration and allowance of the instant application are respectfully requested.

#### ***Rejections Under 35 U.S.C. § 103***

##### **CLAIMS 20, 22, 42 & 44**

Claims 20, 22, 42, and 44 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Olnowich (U.S. Pat. No. 5,654,695) in view of Thalheimer (U.S. Pat. No. 5,996,016). Applicants respectfully traverse because the cited references are not in analogous arts, there is no motivation to combine the references and, even if combined, the references do not teach or suggest every limitation of any claim.

Three requirements must be met to establish a *prima facie* case of obviousness: (1) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings; (2) there must be a reasonable expectation of success; and (3) the prior art reference (or references when combined) must teach or suggest all the claim limitations. MPEP § 2143. The examiner bears the burden of factually supporting a *prima facie* conclusion of obviousness. MPEP § 2142. "To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references." Ex parte Clapp, 227 U.S.P.Q. 972, 973 (Bd. Pat. App. & Inter. 1985); see also MPEP § 2142.

##### **Analogous Art**

Applicants respectfully submit that Olnowich (U.S. Pat. No. 5,654,695) and Thalheimer (U.S. Pat. No. 5,996,016) are not in analogous arts to the invention disclosed in the rejected

claims. In order to rely on a reference(s) as a basis for an obviousness rejection, the reference(s) must be in an analogous art. See MPEP § 2141.01(a). If a reference is in a different field of endeavor, in order to be used as a reference, it still must be one in a field to which the inventor would logically refer in considering his problem. See id. If an examiner relies on a reference as a basis for rejection, “the reference must either be in the field of the applicant’s endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned.” In re Oetiker, 977 F.2d 1443, 1446 (Fed. Cir. 1992). Olnowich relates to a multi-stage switching network for connecting devices *within a computer system* (col. 2, lines 1-3), and Thalheimer relates to a method for intercepting generic bind calls by IP applications *within a single processing system* (col. 2, lines 15-20), neither of which is analogous to the present invention, which includes multiple computers connected by a computer network.

In its rejection of claim 20, the Office Action offers no evidence why Olnowich, a hardware level device switching system, or Thalheimer, a system that allows multiple applications on a computer with a single network interface to operate with multiple alias IP addresses, would be considered to be in the field of or reasonably pertinent to “[a] method of transmitting data packets over a network comprising a plurality of computers connected to each other through a plurality of physical transmission paths.” See MPEP § 2141.01(a). Similarly, the Office Action provides no evidence in its rejection of claim 42 of why Olnowich or Thalheimer are reasonably pertinent to or in the field of “[a] router coupled to a network comprising a plurality of computers connected to each other through a plurality of transmission paths.” Additionally, in its rejection of claims 20 and 42, the Office Action offers no evidence why an inventor would logically refer to Olnowich and/or Thalheimer when considering the problem solved by the invention in claim 42. The mere fact that either reference is related to computers in general does not make it relevant to the subject matter of the particular problem to be solved here. See, e.g., MPEP § 2141.01(a); Wang Laboratories, Inc. v. Toshiba Corp., 993 F.2d 858 (Fed. Cir. 1993) (two references directed to SIMM computer memory not necessarily in analogous arts). The applicants respectfully traverse the rejection to independent claims 20 and 42 under 35 U.S.C. § 103(a) because the cited references are not in analogous arts. Dependent claims 22 and 44 are allowable based on the allowability of base claims 20 and 42.

*No Motivation to Combine*

The Office Action further fails to offer any evidence why one of ordinary skill in the art would be motivated to combine the Olnowich and Thalheimer references. The Federal Circuit has repeatedly stated that the limitations of a claim in a pending application cannot be used as a blueprint to piece together prior art in hindsight, In re Dembiczak, 50 U.S.P.Q.2d 1614 (Fed. Cir. 1999), and that the Patent Office should *rigorously* apply the requirement that a teaching or motivation to combine prior art references needs to be provided. Id. (emphasis added). Nevertheless, the Office Action offers no suggestion to combine the Olnowich and Thalheimer references other than the conclusory statement that “[g]iven these features, a person of ordinary skill in the art would have readily recognized the desirability and advantages of modifying the system shown by Olnowich to employ the features shown by Thalheimer in order to route TCP/IP traffic through a network via unblocked paths.” This is not a suggestion or motivation to combine, but rather is the *result* of the combination and constitutes impermissible hindsight.

The Federal Circuit has stated that it is important to rely on objective evidence and specific factual findings in making a determination of a motivation to combine references. See In re Fine, 837 F.2d 1071 (Fed. Cir. 1988). The Office Action offers no objective evidence or specific factual findings other than the conclusory statement above in its finding of a motivation to combine Olnowich and Thalheimer. In addition, the Office Action provides no evidence of the level of knowledge of one of ordinary skill in the art, or any evidence of how or why a person of ordinary skill in the art would have “readily recognized the desirability and advantages” of combining of Olnowich and Thalheimer. The applicants respectfully traverse the rejection of claims 20, 22, 42, and 44 under 35 U.S.C. § 103(a) because there is a lack of motivation to combine Olnowich and Thalheimer.

*Failure to Teach All of the Claim Limitations*

To establish prima facie obviousness, the prior art reference (or references when combined) must teach or suggest all claim limitations. MPEP § 2143. Even if combined, the cited references fail to teach or suggest all of the limitations of claim 20. Claim 20 recites, in pertinent part: “selecting a next pair of source and destination network addresses generated from an algorithm that generates a plurality of pairs of source and destination network addresses each

associated with the one randomly selected physical transmission path.” The Office Action misapprehends column 6, lines 22-32 of Olnowich as reading on this claim limitation. The cited lines of Olnowich teach selecting a new physical transmission path when a path blockage is detected. In comparison, the plain text of the pertinent part of claim 20 recited above requires “selecting a next pair of source and destination network addresses generated from an algorithm that generates a plurality of pairs of source and destination network addresses each associated with the one randomly selected physical transmission path.” Furthermore, Olnowich does not teach the claim limitation of “an algorithm that generates a plurality of pairs of source and destination network addresses each associated with the one randomly selected transmission path.” Instead, the algorithm in column 6, lines 22-32 of Olnowich describes a system that chooses a new physical transmission path in the event of a path blockage. The algorithm in the cited lines of Olnowich does not teach generating a plurality of pairs of source and destination addresses or even the use of such addresses.

Combining the Olnowich reference with Thalheimer still fails to teach all of the limitations of claim 20. The examiner describes Thalheimer as showing a method of implementing multiple IP applications with separate IP addresses on a single network interface. However, the Office Action offers no discussion of how this reference, alone or combined with Olnowich, teaches or suggests the limitations of claim 20.

Similarly to claim 20, the applicants respectfully traverse the rejection of claim 42 as being an obvious modification to Olnowich in light of Thalheimer. Claim 42 recites, in pertinent part, “the router, for each data packet, randomly selects one of the plurality of physical transmission paths through the plurality of computers and transmits each data packet over the randomly selected physical transmission path using a pair of source and destination network addresses generated from an algorithm that generates a plurality of pairs of source and destination addresses each associated with the one randomly selected physical transmission path.” The Office Action reads column 6, lines 22-32 of Olnowich as teaching this limitation of claim 42. However, this reading misapprehends what is described in the Olnowich patent. Olnowich does not teach or suggest “algorithm that generates a plurality of pairs of source and destination addresses each associated with the one randomly selected physical transmission path.” The algorithm described in column 6, lines 22-32 of Olnowich teaches choosing a *new*

*physical transmission path*. The algorithm in the cited lines of Olnowich does not teach generating a plurality of pairs of source and destination addresses or even the use of such source and destination addresses.

The Office Action makes additional conclusory statements that a “router coupled to a network, “a plurality of computers” and “network addresses” are features that are well known in the art and would be obvious modifications to Olnowich in view of Thalheimer. In addition, the Office Action alleges that Olnowich and Thalheimer each describe characteristics of routers that bear on the allowability of claim 42. However, in reference to these statements the Office Action fails to describe the level of knowledge of a person of ordinary skill in the art, why such characteristics are known in the art, why such characteristics would be an obvious modification to Olnowich in view of Thalheimer, or why such characteristics even bear on the allowability of claim 42.

The applicants respectfully traverse the rejection of claims 20 and 42 under 35 U.S.C. § 103(a) because Olnowich and Thalheimer fail to teach all of the claim limitations of the rejected claims. Dependent claims 22 and 44 are allowable based on the allowability of base claims 20 and 42.

#### CLAIMS 50, 51 & 53

Claims 50, 51, and 53 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Shannon (U.S. Pat. No. 6,233,618) in view of the Shankar article “A Verified Sliding Window Protocol with Variable Flow Control” (hereinafter Shankar). Applicants respectfully traverse. Claim 50 recites:

A receiving computer that receives data packets from a transmitting computer, herein the receiving computer comprises computer instructions that execute the steps of:

- (1) for each received data packet, extracting a discriminator value inserted by the transmitting computer;
- (2) comparing the extracted discriminator value to a set of valid discriminator values on the basis of information previously shared with the transmitting computer; and

(3) in response to detecting a match in step (2), accepting the received data packet for further processing and otherwise rejecting the data packet, wherein the receiving computer maintains a sliding window of valid discriminator values, wherein the window slides to encompass a next range of valid discriminator values in response to detecting matches.

The Office Action fails to offer any evidence why one of ordinary skill in the art would be motivated to combine the Shannon and Shankar references. As above, the Office Action offers no suggestion to combine the Shannon and Shankar references other than the conclusory statement that “[g]iven this feature, a person of ordinary skill in the art would have readily recognized the desirability and advantages of modifying the system shown by Shannon to employ the features shown by Shankar in order to maintain a flow control of messages in real-time environments.” Again, this is not a motivation, but the end result of the alleged combination. The Office Action offers no objective evidence or specific factual findings other than the conclusory statement above finding a motivation to combine Shannon and Shankar. In addition, the Office Action provides no evidence of the level of knowledge of one of ordinary skill in the art, or any evidence of how or why a person of ordinary skill in the art would have “readily recognized the desirability and advantages” of combining of Shannon and Shankar. The applicants respectfully traverse the rejection of claim 50 under 35 U.S.C. § 103(a) because of a lack of motivation to combine. Dependent claims 51 and 53 are allowable based on the allowability of base claim 50.

#### CLAIMS 68-70

Claims 68-70 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Olnowich in view of Shannon. Similarly, the applicants respectfully traverse this rejection because the Olnowich patent is not in an analogous art, there is no motivation to combine, and, even if combined, the combination does not teach or suggest all the claim elements.

#### Analogous Art

Olnowich relates to a multi-stage switching network for connecting devices within a computer system (col. 2, lines 1-3). In its rejection of claim 68, the Office Action offers no

evidence why an inventor would logically refer to Olnowich, a device designed to send data between hardware elements like microprocessors within a single computer system, when considering the problem solved by the invention in claim 68, which recites “[a] transmitting computer that transmits data packets to a receiving computer over a network.” The mere fact the Olnowich reference is related to computers does not make it relevant to the subject matter of the particular problem to be solved here. See, e.g., MPEP § 2141.01(a); Wang Laboratories, Inc. v. Toshiba Corp., 993 F.2d 858 (Fed. Cir. 1993) (two references directed to SIMM computer memory not necessarily in analogous arts). The applicants respectfully traverse the rejections to independent claim 68 under 35 U.S.C. § 103(a) because the cited references are not in analogous arts. Dependent claims 69 and 70 are allowable based on the allowability of base claim 68.

#### *No Motivation to Combine*

The Office Action fails to offer any evidence why one of ordinary skill in the art would be motivated to combine the Olnowich and Shannon references other than making the conclusory statement that “[g]iven this feature, a person of ordinary skill in the art would have readily recognized the desirability and advantages of modifying the system shown by Olnowich to employ the feature shown by Shannon, in order to provide access control for network security based on the identity of [the] request node.” Yet again, this is not a motivation, but instead a result of the combination. As above, the Office Action offers no objective evidence or specific factual findings to support finding a motivation to combine Olnowich and Shannon. The applicants respectfully traverse the rejection of claim 68 under 35 U.S.C. § 103(a) because there is a lack of motivation to combine. Dependent claims 69 and 70 are allowable based on the allowability of base claim 68.

#### *Failure to Teach All of the Claim Limitations*

The cited references, even if combined, fail to teach or suggest all of the limitations of claim 68. Claim 68 recites, in pertinent part, “[a] transmitting computer that transmits data packets to a receiving computer over a network.” The Office Action states that column 4, lines 63-65 of Olnowich shows “transmitting a data packet.” However, this reading misapprehends what is described in the Olnowich patent. The cited lines of Olnowich describe a crossbar switch

that allows data to pass from any input of the switch to any output. However, a crossbar switch like the one described in the Olnowich patent does not utilize data packets to route information, it simply routes data between devices within a single computer system based on the state of the address bits on the switch. In fact, there is no reference to data packets in the entire Olnowich patent.

In addition, claim 68 further recites, in pertinent part: "the network address is used to route data packets over the network and is generated using an algorithm that selects the network address quasi-randomly from a plurality of network addresses that are each mapped to the receiving computer." The Office Action states that column 6, lines 22-32 of Olnowich teach this claim limitation. However, the Office Action again misapprehends what the cited lines of Olnowich teach. Lines 22-32 of Olnowich does not use network addresses to route data packets over the network, instead it only selects discrete physical transmission paths over which to transmit data. Additionally, Olnowich does not teach an algorithm that selects network addresses quasi-randomly from a plurality of network addresses that are each mapped to the receiving computer. Instead, the algorithm in column 6, lines 22-32 of Olnowich teaches choosing a new physical transmission path either at random or through an incremental counter. In addition, combining the Shannon reference with Olnowich does not contribute any additional information that would cure the deficiencies of Olnowich. The applicants respectfully traverse the rejection of claim 68 under 35 U.S.C. § 103(a) because the cited references fail to teach or suggest all of the claim limitations. Dependent claims 69 and 70 are allowable based on the allowability of base claim 68.

(Conclusion follows on next page)



**CONCLUSION**

Based on the aforementioned, all pending claims are in condition for allowance. Therefore, it is respectfully requested that the subject application be reconsidered and passed to issue at the Examiner's earliest possible convenience. However, if for any reason the Examiner believes the application is not in condition for allowance or there are any questions, the examiner is requested to contact the undersigned at (202) 824-3153.

Respectfully submitted,

BANNER & WITCOFF, LTD.

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By:

  
Ross Dannenberg, Registration No. 49,024

1001 G Street, N.W.  
Washington, D.C. 20001-4597  
Tel: (202) 824-3000  
Fax: (202) 824-3001  
RAD/mmd